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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,208	01/02/2002	Warren J. Warwick	39340.1.1.3	8599

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EXAMINER

THANH, QUANG D

ART UNIT	PAPER NUMBER
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3764

DATE MAILED: 01/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/038,208	WARWICK ET AL.	
	Examiner	Art Unit	
	Quang D. Thanh	3764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 4,9,14,17,20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/05/2003 has been entered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a) because in fig. 2, there are two separate views of the same thing and as such it should be labeled separately as 2(a) and 2(b). The specification should also include descriptions of figs. 2 (a) and 2 (b) and appropriate correction on pages 9-10 should be made accordingly. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 4 and 14 are objected to because of the following informalities: "a motor-driven rotating blade" (p. 3, line 2 and p. 5, line 6) has already been recited in claims 1 and 13 and therefore it is not clear if this rotating blade is the same or another additional blade. And since both "a mechanism" (claim 1) and "a pulse frequency control component" (claim 4) comprising a motor-driven rotating blade, it is unclear if these structure are the same or different.

4. Claims 9, 17 and 20 are objected to because the limitation "the valve" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-11, 13-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear how much patentable weight can be given to the language of claims 1 and 10 "wave form that comprises a fast rise sine wave at any frequency between 6 and 15 Hz". This limitation appears to be merely describing functional intended use language. This language fails to positively recite any further structural limitations over what has already been claimed. The remaining claims are also rejected since they depend on a rejected claim.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13-32 of copending Application No. 10/030,447 in view of Van Brunt. Although the conflicting claims are not identical, they are not patentably distinct from each other because since Van Brunt teaches that it is desirable for a mucous mobilization to use a sinusoidal waveform of about 20Hz (col. 5, lines 5-6) and to use a valve 30 having a rapid respond time of about 4 milliseconds and thus it would be obvious to operate the device of the copending Application No. 10/030,447 so that the sinusoidal wave form would comprise a fast rise sine wave at any frequency between 6 and 15 Hz", as suggested by Van Brunt, in order to mobilize the mucous more effectively.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Brunt (6,030,353) in view of Meredith et al. (3,307,533) and Whitney (3,462,778).

10. Re claims 1 and 11, Van Brunt discloses a chest compression apparatus (fig. 1) comprising: a mechanism comprising a bladder 2 for receiving pressurized air, a mechanism comprising a valve 30 (col. 5, lines 36-47) adapted to interrupt periodically the air stream for supplying substantially sinusoidal wave form air pressure pulses (col. 5, lines 4-7) to the bladder. The only difference between Van Brunt's device and the claimed invention is that Van Brunt's valve is not a motor-driven rotating blade. Nevertheless, Van Brunt's reference suggests that any suitable types of valves can be used in order to provide a continuously variable range of airflow restriction between the fully close and open positions (col.5, lines 35-47). Van Brunt also teaches that it is desirable for a mucous mobilization to use a sinusoidal waveform of about 20Hz (col. 5, lines 5-6) and to use a valve 30 having a rapid respond time of about 4 milliseconds and thus appears to comprehend the limitation "a wave form that comprises a fast rise sine wave at any frequency between 6 and 15 Hz". Additionally, Meredith teaches an apparatus for generating and controlling pressure, the apparatus comprising a motor-

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driven rotating disk 31 for "producing a succession of pressure pulses that can be transmitted to a plurality of bladders causing these bladders to inflate and deflate" and thus the net result is the production of rapid pulses (col. 4, lines 20-59). Moreover, Whitney teaches in figs. 2-4 a motor-driven valve 31 having a rotating blade 53 that is capable of interrupt periodically the air stream (col. 4, lines 46-71) for supplying substantially sinusoidal air pressure pulses (fig. 5 shows sinusoidal wave form air pressure pulses). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the device in the Van Brunt's reference, to select a valve having rotating blade, as suggested by Whitney and Meredith, as a suitable valve for the purpose of providing a continuously variable range of air flow restriction between the fully close and open positions (Van Brunt, col.5, lines 35-47), providing a pulsating pressure (Meredith, col. 4, lines 20-59), and especially for supplying substantially sinusoidal air pressure pulses therapeutically desirable for mucous mobilization (Van Brunt, col. 5, lines 4-6).

11. Re claims 2, 10 and 12, Van Brunt appears to be silent with regard to how the air is exhausted from the vest. Whitney completes the Van Brunt's disclosure by providing the details of venting the bladder as the rotating blade 53 alternately aligns the bladder with positive pressure inlet and exhaust to atmosphere outlet. Such would have been an obvious provision in Van Blunt.

12. Re claims 3-5, 8-9, 13-15 and 18 , Van Brunt further discloses an air flow generator component 6 , a pulse frequency control component 44 in communication with the air flow generator (fig. 1), a pressure control component 24 in communication

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with the frequency control component (col. 5, lines 1-13), a patient vest 4 (fig. 1), wherein both pulse frequency control and pressure control components can be used by the patient or preset by the physician so as to deliver sinusoidal wave form compression pulses (col. 3, lines 8-18); the apparatus provides a maximum pressure of about 60 mm Hg or less (col. 5, lines 4-7 discloses that the pressure is about 1 PSI ~ 52 mm Hg) and the valve is used to establish and determine the rate and duration of air pulses (col. 5, lines 36-47).

13. Re claims 6-7, 16-17 and 19-20, Van Brunt discloses the apparatus being lightweight , relatively small, low cost and quiet, except for the exact weight of the apparatus. However, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to design the apparatus so that it can be weighted about 15 lbs or less, because by optimizing the weight of the apparatus such that it can be light-weight would allow the user to use more conveniently. One of ordinary skill in the art, furthermore, would have expected that the device would perform equally well with either designs because the weight feature does not affect the performance of chest compression. Therefore, it would have been an obvious matter of design choice to modify the apparatus of Van Brunt to obtain the invention as specified in the claims. Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the weight of the apparatus such that it can be lightweight , since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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Response to Remarks

14. Applicant's remarks filed on 11/5/2003 have been fully considered but they are not persuasive. The only difference between Van Brunt and the claimed invention is the details of the valve 30. Van Brunt gives examples of suitable valves that include "steeper-driven valves, magnetic flapper valves and cone-driven valves" but is not restricted to any one type as long as it provides a continuously variable range of air flow restriction between the fully close and open positions (col. 5, lines 35-47). Rotating-blade valve is old and well known in the art and both Meredith and Whitney exemplify this equivalent alternative valve for performing the same function and Whitney's figure 5 shows a sinusoidal waveform as required by Van Brunt.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang D. Thanh whose telephone number is (703) 605-4354. The examiner can normally be reached on Monday-Thursday & alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Lucchesi can be reached on (703) 308-2698. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

Quang D. Thanh
Patent Examiner
Art Unit 3764
January 20, 2004



Danton D. DeMille
Primary Examiner